ED Domes and EDM Domes

ED

ED, the disc contact is a momentary tact switch with short travel and good tactile feedback. Direct mounting on a printed circuit board is possible.

In that case, the dome must be actuated by a soft actuator of 3.0 mm (0.118) minimum diameter. The ED dome is available in various types of modules and is the main component of several switches presented in this catalog.

Self-cleaning system:
The contact is made on at least 3 points of the lower diaphragm, these 3 points of contacts are always different at each new switch action. During the switching movement, the upper disc slides on the lower diaphragm, ensuring the contact's self-cleaning.

EDM

The EDM is available in 4 versions:
EDM 450 AU
EDM 650 AU
EDM 450 AG
EDM 650 AG

The EDM Multi Dome Series was developed for low profile applications needing increased tactile response and high performance specifications.

Applications range from aircraft instrument panels to radio keypads. This high performance dome switch combines our reliable ED contact system with added tactile domes for forces of 4.5N (450 grams) and 6.5N (650 grams).

Main features

- Gold (Au) or silver (Ag) contacts
- Two different operating forces
- Low profile
- Compact PWB spacing
- Proven application in avionics

Construction	ED	EDM
Function	Momentary	Momentary
Contact arrangement	1 make contact = SPST	1 make contact=SPST,NO
Distance between button	12.7 (0.500)	12.7 (0.500) centers, min.
Terminals	PC pins or tabs	PC pins or tabs

Electrical data	Silver	Gold	
Switching power max. AC/DC	6 W	3 W	3 W
Switching voltage max. AC/DC	100 V	100 V	100 V DC
Switching current max. AC/DC	100 mA	50 mA	50 mA
Carrying current max. AC/DC	250 mA	250 mA	
Dielectric strength (50 Hz/1 Min.)	$\geqq$ 300 V	$\geqq$ 300 V	$\geqq$ 300 V
Operating life with max. switching power	$\geqq 10^6$ operations	$\geqq 5 \times 10^6$ operations	
Contact resistance	$\leqq$ 10 mΩ	$\leqq$ 15 mΩ	$\leqq$ 15 mΩ
Insulation resistance (100 V)	$\geqq 10^{11}$ Ω	$\geqq 10^{11}$ Ω	$\geqq 10^{11}$ Ω
Contact bounce	$\leqq$ 100 µs	$\leqq$ 100 µs	$\leqq$ 1ms

Mechanical data	ED	EDM
Switching travel	0.3 (0.012) Max. admissible 0.5 (0.02)	0.4 (0.0157) Max. admissible 0.5 (0.0197)
Operating force	2.4N ± 25% (240 grams ± 25%)	4.5N (450 grams) ±25% 6.5N (650 grams) ±25%

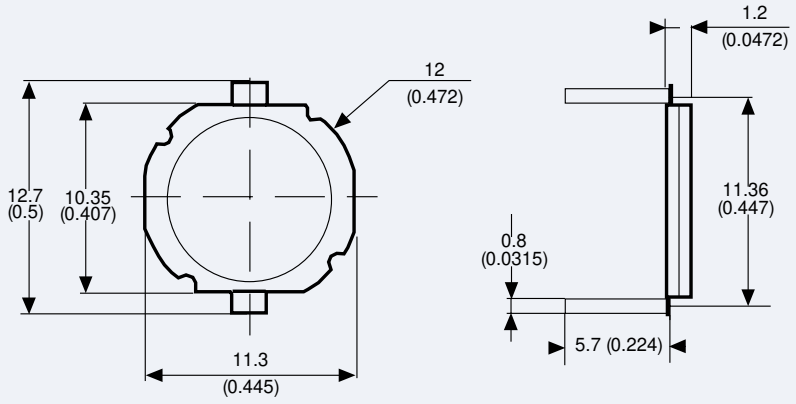
Further data			
Contact material		Silver plated, Gold plated	Ag (silver plated) Au (gold plated)
Operating temperature		– 25°C to + 70°C	-55°C to +85°C
Storage temperature		– 40°C to + 85°C	-55°C to + 85°C
Material	housing		Thermoplastic
	contact base		Phosphor bronze
	plating of contact area		1.5 microns gold (G)

Climatic data	
Climatic category (days)	10 for silver version 56 for gold version
Soldering by static bath	255°C for 5 seconds

Ordering code: see next page.

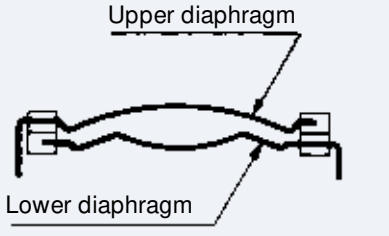
Dimensional Drawings

ED Domes

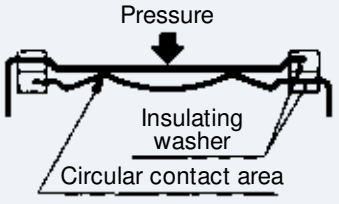


Switch action principal

The disc contact is essentially made of two separate conductive domes diaphragms separated by an insulated material.
The upper diaphragm is shaped so that under pressure it collapses suddenly and establishes contact with the lower diaphragm.



SWITCH IN RESTING POSITION



SWITCH IN ACTIVE POSITION

Ordering code		1	2	3	4
		Example:	ED	S	SC	0
1	**Designation:** ED / EDM450 / EDM650				
2	**Contact material:** S = silver, G = gold				
3	**Contacts:** AC = with PC pins, SC = with tabs				
4	**Sealing:** 0 = flux sealed, 1 = totally sealed				